ID contributo: **29** Tipo: **Parallel talk**

Search for dark matter decay and annihilation using observation by Tibet AS$_\gamma$ and LHAASO

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Recently, Tibet AS$_\gamma$ and LHAASO have observed very high energy diffuse gamma rays in the Galactic place between 10 TeV and 1 PeV energies. In our work, we utilize these observations to search for dark matter decay or annihilation signals to Standard Model particles. In addition to the primary gamma-ray originating from various Standard Model particles, we also include secondary gamma-rays generated in these processes. We also consider the effects of dark matter substructures and tidal disruption. We place constraints on dark matter annihilation cross-section and decay lifetime for a wide range of dark matter masses. Future observation of these high-energy gamma rays can further help us either discover particle dark matter or better constrain its properties.

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Classifica Sessioni: Parallel 2

Classificazione della track: Parallel session: Indirect detection